



**STRATEGY
RESEARCH
PROJECT**

The views expressed in this paper are those of the author and do not necessarily reflect the views of the Department of Defense or any of its agencies. This document may not be released for open publication until it has been cleared by the appropriate military service or government agency.

**INTEGRATING MODERN STAFF COMMUNICATIONS
INTO AN EFFECTIVE STAFF ACTION MODEL**

BY

LIEUTENANT COLONEL FREDERICK J. GARGIULO
United States Army

DISTRIBUTION STATEMENT A:
Approved for Public Release.
Distribution is Unlimited.

USAWC CLASS OF 2002



U.S. ARMY WAR COLLEGE, CARLISLE BARRACKS, PA 17013-5050

20020530 122

USAWC STRATEGY RESEARCH PROJECT

INTEGRATING MODERN STAFF COMMUNICATIONS INTO AN EFFECTIVE STAFF ACTION MODEL

by

LIEUTENANT COLONEL FREDERICK J. GARGIULO
United States Army

Lieutenant Colonel Cary A. Hilton
Project Advisor

The views expressed in this academic research paper are those of the author and do not necessarily reflect the official policy or position of the U.S. Government, the Department of Defense, or any of its agencies.

U.S. Army War College
CARLISLE BARRACKS, PENNSYLVANIA 17013

DISTRIBUTION STATEMENT A:

Approved for public release.
Distribution is unlimited.

ABSTRACT

AUTHOR: LTC Frederick J. Gargiulo

TITLE: Integrating Modern Staff Communications Into an Effective Staff Action Model

FORMAT: Strategy Research Project

DATE: 09 April 2002

PAGES: 31

CLASSIFICATION: Unclassified

Electronic mail, or email, is a relatively new method of communication that has joined the telephone and letter as one of the top three preferred methods of communication in the corporate, defense and private sectors since the Internet has reached market dominance. Although there are great advantages and efficiencies made available by the proliferation of email, its ease of use and capability of nearly instantaneous global contact allows users to waste recipient's time, contribute to "information overload" and cause potentially devastating liabilities if used inappropriately. This paper seeks to identify weaknesses in the electronic communications media, cause senior leaders to recognize that there are detrimental issues caused by inappropriate use and to solicit leaders to teach and train subordinate email users on more effective email procedures. A recommendation is made to the Army, as part of a network-centric, knowledge-based organization, to develop, publish and teach an overarching, organizational doctrine and policy on effective email use through standardization and application of a structured staff model.

TABLE OF CONTENTS

ABSTRACT	iii
INTEGRATING MODERN STAFF COMMUNICATIONS INTO AN EFFECTIVE STAFF ACTION MODEL .	1
BACKGROUND	1
THE INTERNET.....	1
ELECTRONIC MAIL	3
ADVANTAGES AND DISADVANTAGES	4
INFORMATION OVERLOAD	5
NETIQUETTE	7
“THE RECEIVER’S PLIGHT” – AN ARMY DILEMMA	11
CURRENT ARMY POLICY	14
EDUCATION.....	15
RECOMMENDATION	16
CONCLUSION	17
ENDNOTES	19
BIBLIOGRAPHY	23

INTEGRATING MODERN STAFF COMMUNICATIONS INTO AN EFFECTIVE STAFF ACTION MODEL

Technology can be a blessing and a curse.

—Jacqueline Whitmore

Although it is a relatively new method of personal interaction, electronic mail (commonly called e-mail or email) has become a predominant and effective form of communication in the Army. The Army implemented email at about the same pace as private industry, but, unlike its efforts with written correspondence, it has been slow to develop any comprehensive standards or protocols for appropriate individual use. When misused, this form of communication can waste time, create confusion, contribute to "information overload" and cause potentially devastating legal liabilities. This paper seeks to identify weaknesses in the electronic communications media and to cause senior leaders to recognize the detrimental aspects of inappropriate use. It further solicits leader involvement to develop and train the Army on an electronic mail doctrine and policy to enhance effective staff communications. If successful, these changes would complement the Army's transition towards a network-centric, knowledge-based organization.

BACKGROUND

Email was initially introduced as a software application that was designed to allow digital text communications between microcomputers. It became much more prevalent as these microcomputers became economically affordable. It is possible for users to be connected internally and exclusively to their own organization on a local area network (LAN) without links to outside agencies or for the LAN to operate on an external link known as the Internet. Without the advent of the Internet, it is not likely that email would have even been conceived, much less attain its current prominence as a powerful global communication tool.

THE INTERNET

The Internet, undoubtedly one of the nation's fastest growing and most prolific infrastructures, has become an enabling vehicle for commerce and communication that supports both a domestic and global economy. Worldwide, there were about 130.6 million active Internet users in 1999, and this number is expected to surge to 362 million by 2003.¹ "Communication and information technologies have been cited... as the principal drivers of the economy," according to the U.S. Commerce Department, and they credit it "for one-third of U.S.

economic growth.”² Business America claims “The Internet has the potential to become the United State’s most active trading vehicle within a decade, creating millions of... jobs”.³

Its four-decade history, a product of the Cold War, is as fascinating for its exponential growth as it is for its demonstrated ability to change the global marketplace. It has revolutionized and accelerated the world of communications and world commerce like nothing before. Today, it is becoming increasingly rare to find a presentation, advertisement, presidential speech, or routine interaction in America without encountering terms such as “.com” or “www” to describe an Internet address or World Wide Web Internet site for additional information on virtually any subject.

There has been an entirely new arsenal of terms added to the international lexicon to facilitate shared discussion on the subject. The development of the Internet began with the Soviet Union’s 1957 launching of Sputnik, the first extra-atmospheric satellite to circle Earth. As a result of this launch, the United States had instantly entered a second place position in the “space race” and President Eisenhower correctly realized that national security and prestige were in jeopardy. Fearing the potential for a space-launched weapon of mass destruction by the Soviet Union, it became apparent that the United States needed a communications system that could withstand a nuclear attack. An obscure defense research group known as Department of Defense Advanced Research Project Agency (DARPA) devised a solution using a method to link computers together throughout the country in a massively redundant web of nodes and lines. The project was referred to as ARPANET and the concept was to ensure information could still be spread across the continent via a connected web of computer-links. Even if multiple sites, telephone distribution centers and lines were destroyed in a nuclear attack, submitted electronic data would simply bypass the destroyed portions of the web to ultimately wind up at its intended destination by using the next most direct route. In the early stages, only select government agencies and a few universities with mainframe computers were linked. The DARPA scientists likely never considered that personal computers, connected to the Internet, would one day be in almost every home, library, store and institution in America.⁴

A phenomenal, almost exponential growth of the Internet occurred, partially fueled by a similarly exponential growth in the personal computing industry. In 1968, the Internet consisted of four computer hosts operating on a data transfer rate backbone (physical connection between computers) of fifty kilobytes per second (50 Kbps). By 1974, the number of hosts grew to greater than twenty-three and two years later, there were over 111 hosts with connectivity that incorporated satellite and radio linkages. 1986 welcomed 2,308 hosts and the introduction of multiple 50 Kbps backbones as well as T1 connections of 1.544 Megabytes per second (Mbps).

Growth and development continued into 1992 which featured 45 Mbps T3 connections, numerous private interconnected 56 Kbps backbones and 1,136,000 hosts. Today, there are 145 Mbps asynchronous transfer mode (ATM) connections; private interconnected backbones consisting mainly of 56 Kbps, 1.544 Mbps, 45 Mbps, and 155 Mbps lines; satellite and radio connections and over 15,000,000 hosts.⁵ Worldwide, there were about 130.6 million active Internet users in 1999, and this number is expected to surge to 362 million by 2003.⁶

Understandably, the Internet has recently been classified as a critical national infrastructure by the government, particularly considering a national dependence on it to transfer private medical information, financial transactions, corporate confidential data and personal communications. The National Security Strategies of 1998 to 2000 revealed that national security had become increasingly more dependent on information infrastructure, is highly interdependent and has become increasingly vulnerable to tampering and exploitation.^{7, 8}

ELECTRONIC MAIL

Email is a mix of the phone call and the letter. It's a crossroads of new technology and an old format: written correspondence. It brings up all the issues people have relating to both of those things.

—Perrin Cunningham

Electronic mail programs and their proliferation in the marketplace and on the Internet have been evolving since the Internet started to reach market dominance. The first email program is reported to have been created in 1972.⁹ Widespread email use has grown as an offshoot of the Internet and today has become an integral method of private and public communication. By 1999, email volume exceeded regular mail by a factor of ten and by the year 2000, it was being used regularly in eighty percent of all U.S. households.¹⁰ A 2000 survey conducted by the UCLA Center for Communication Policy (*The UCLA Internet Report: Surveying the Digital Future*) indicated that forty-two percent of all Americans use email daily. The survey estimated email as the second most popular activity on the Internet with eighty-one percent of all Internet users in the U.S. using email.¹¹ The volume of email has increased dramatically with more than a million messages passing through the Internet every hour. It is estimated that 2.7 trillion email messages were sent in 1997 and between seventy to eighty percent of American businesses have access to email.¹² By all accounts, this growth trend is not slowing. Reports in the year 2000 indicate that there were 452 million email mailboxes and approximately 9.7 billion messages exchanged on an average day. In 2005, the numbers are predicted to jump to 983 million mailboxes and thirty-five billion messages. In many ways, email

has become a victim of its own success.¹³ The Department of Defense and Army are not excluded from this widespread proliferation. In fact, a snapshot of email volume of 1,114 accounts at the United States Army War College in Carlisle Barracks, Pennsylvania showed that 20,378 emails were sent externally, 70,649 external email messages were received, and 46,497 local emails were delivered in a single 24 hour period.¹⁴

ADVANTAGES AND DISADVANTAGES

Email, as an alternative to normal mail and telephones in the workplace, has benefits and disadvantages. It can consume significant portions of an employee's workday. According to a recent study by Ferris Research, the average corporate email user now spends almost two hours a day processing email. The study indicates that personal communications, unnecessary cc'ing (a colloquial term for electronically "carbon copying" a message to another recipient for information), spam (an Internet term for unwanted email messages - usually unsolicited advertisements), and the like contribute to wasted time. Conversely, the study points out that because email ultimately replaces many time-consuming practices, such as posting normal mail, sending faxes, playing telephone tag, and physically placing a document in a filing cabinet, the average corporate email user winds up saving a total of ninety minutes a day.¹⁵ A master's level thesis entitled Electronic Mail as a Media Choice for Managers discusses the ways in which the introduction of email changes how managers communicate with their subordinates. The research indicated that communications channels or media (such as email) that are readily accessible and universal throughout the organization might keep necessary information flowing to those who depend on it. The research indicates that email is a form of media communication whose attributes give it potential to positively impact the way in which organization members communicate job-related, interdependent information.¹⁶

Different methods of communication have varying levels of media richness, or an ability to resolve ambiguity. Forms of media can be either rich or lean, based on their abilities to communicate information effectively and without ambiguity. In a 1986 study by Daft and Lengel, five methods of communication were rated on their levels of richness, with 'face-to-face' being the richest, followed by 'telephone', 'letters and memos', 'impersonal written documents' and lastly by 'numeric documents'. In 1990, the same researchers expanded their ratings to include email. Interestingly, email was rated as the third richest form of communication, leaner than telephones and richer than letters or memos. The same researchers found that managers tended to tailor the form of media used to the level of ambiguity expected in the content of the message. In other words, email was found to be an acceptable media for sending routine

information, sending questions and conducting transactions that did not require high levels of interpersonal involvement.¹⁷ Clearly there are more factors involved in effective communication than the simple transfer of words. Body language, word inflection, tone, facial expressions, sarcasm and humor, to name a few, all play a large part in effective communication, and email messages, no matter how well crafted, simply cannot capture these aspects as well as face-to-face or other real-time, verbally interactive communication. For this reason, email users should understand and recognize that email has limitations and is not appropriate for all interactions.

While email has limitations, it also has potent advantages that are not readily available in other forms of media. Email serves as a powerful communication tool in the work environment and in private use that allows users to reach multiple recipients with a consistent message over large distances almost instantaneously. If a recipient is not available, the message is standing by until the recipient chooses to respond. No longer does more than one party have to physically be in their office to begin corresponding and collaborating as with the telephone. In a study by Connel and Galbraith, they cite email as a system of communication that makes most sense for organizations that need rapid communication between departments and different sites. As a result, they state that more and more organizations are introducing email to their employees as a means to improve office productivity and communication.¹⁸ In a similar study by Contractor and Eisenberg, they indicate that employees with access to managers via email dramatically increase their communications with their superiors. Two other researchers, Dallinger and Hample, note that increased accessibility by subordinates to their managers positively affects the organizational climate and communication satisfaction and that it results in a less centralized, less structured system of communication.¹⁹

INFORMATION OVERLOAD

In today's environment of maximized connectivity where technological developments of communication tools such as email, fax machines, cellular phones, pagers, text-based pagers, and wireless Personal Digital Assistants (PDA), average white-collar workers remain "connected" to work even while they are away from the office. Contacting a "connected" person is easier than ever, but has this facility caused a counter-productivity phenomenon? A recurring question that surfaces in the literature is "Has email really made us more productive?" Some believe it has and some believe that quite the opposite has occurred. While there is no real agreement on the issue, the literature clearly describes a condition of frustration created by this new connectivity known as "information overload."

Pitney Bowes completed a recent study that suggests the average corporate business person processes more than 180 email messages each day and suggests that the difficulties associated with this volume of correspondence are immense. The study describes email overload as a result that can be addressed with technological and cultural means.

Technological solutions would include use of software filters to filter out unwanted messages, auto-responses to simplify response times for users, and use of a message priority system to separate the critical from the routine messages. Culturally, users could be taught to use email distribution lists more judiciously, copying people on a need-to-know only basis and, once developed, to comply with corporate policies on appropriate use of email.²⁰

Other solutions taken by senior managers who have to contend with massive (and often inappropriate) messaging by subordinates and customers include filtering of messages by executive secretaries and, in many cases, additions of private email addresses that are known only to a select few inside the company. Apparently this method is not used exclusively by senior managers. As email messages arrive at in-boxes at voluminous rates, many recipients attempt controls by setting up multiple email accounts. In addition to work accounts, they open private-use accounts, Internet-based shopping accounts, and, particularly for the more famous and controversial users (such as the likes of Bill Gates and others), decoy accounts to deflect spam. More than thirty-nine percent of employees in a recent survey by Vault, a job-board company that researches employee activities, said that they maintained two accounts, a work address and another address. Of the 901 people polled, thirty percent said they kept three accounts, nineteen percent said they kept four accounts and ten percent led an even more segmented life, maintaining five accounts or more. The subject of email addresses among chief executives is so touchy that when media relations officers were asked whether Jerry Yang, a co-founder of Yahoo, or Meg Whitman, the chief executive of eBay, had multiple email accounts, these representatives would provide no comment. Steve Talbott, editor of NetFuture, an electronic newsletter, adopted a most unique approach. He disconnected. Mr. Talbott announced this decision in his newsletter, which features essays about consequences of technology. The endless torrent of messages, he wrote, were "keeping him from focusing on his work and the many hours at the computer were taking a toll on his neck." The newsletter would continue to be sent by email, but he would no longer check his email account. For those who wanted to reach him, he suggested the telephone or the postal service.²¹

The literature is replete with assertions that email is here to stay – that we cannot go back or even do without it in business any longer. "The fact is, we cannot now live without email," one writer began, adding, "The technology is already available to circumvent many of

its...shortcomings."²² While Mr. Talbott of NetFuture may have sworn off email, he must surely know that his career teeters at the far end of a lever where email rests as the fulcrum of his column's success.

NETIQUETTE

There are other difficulties associated with using email. They revolve around how email is used and how messages are crafted. Some are simple irritants and others could be significant enough to damage an employee's career if the offending message lands in the wrong inbox. An indicator of the magnitude of the problem with how well, or how effectively users employ email is the sheer volume of web sites and articles that describe appropriate email etiquette, or netiquette. In fact, there are entire books devoted to the subject as well as consulting firms that, specializing in acceptable office behavior, include email etiquette as a significant item of education. The Connecticut State Government has a web site devoted to email use guidelines. Connecticut's stated purpose is twofold: to outline appropriate conventions and style elements for message composition and to enable employees to present themselves effectively and professionally via email. These guidelines include the major categories of "knowing your audience" and "message composition." They caution senders to format messages such that they are brief, to the point, and easy to read.²³ There are numerous other netiquette lists and tips that are as redundant as they are frequent. Important examples for the Army of some of the more prevalent points include:^{24, 25, 26}

- Glaring typographical errors, such as misspellings and poor grammar are unacceptable and unnecessary. Use spell-check if necessary. Because your correspondence says a lot about you and your organization, you should ensure it is a favorable reflection of your true capabilities.
- Read your message before you send it, particularly if you're responding to a message that has irritated you. Rapidly drafted messages (and speed *is* the point of email) have a tendency to be cryptic and are often not perceived by the recipient as you had intended. Stop to think how the other person is likely to receive your message. This will go a long way towards preventing misunderstandings and not giving offense. If you were irritated when you drafted the message, a great rule of thumb is to let the email sit for an hour or so before sending it while you cool off.
- Be brief. Get to your point as quickly as you can. A recipient's time should be respected and most recipients simply don't have the time to read a message in which you are "thinking out loud." Writers should plan ahead and not just make up content

as they go along. If a message needs to be several pages long, a meeting or telephone call might be preferable. All email programs have a header line for the subject and most have a feature that allows users to read the first three lines of the message. Make the most of these features to allow a recipient to determine what the message is about. It may make the difference between a rapid response and your message being ignored indefinitely, or worse yet, deleted without being read. On the other hand, business messages will usually be longer than personal notes, so don't sacrifice understanding for the sake of brevity. Alternately, some messages get right to the point a little too quickly when the writer wastes no time asking for what he or she needs without bothering to be polite. Civility costs nothing; incivility might cost more than you would expect.

- Don't over-distribute email. Not long ago, copies of correspondence were made with carbon paper and distribution was made sparingly, limited always by the number of carbon sheets a typewriter could press through while still attaining legibility. Email, on the other hand, makes it exceedingly easy to copy mass recipients and too many senders abuse this capability. Respect other people's time by sending messages only to those who must have the information. Otherwise you run the risk of being resented, or even worse, ignored. Too frequently, users are subjected to emails that are not specifically intended for them, yet they are but one of a large number of addressees on the same message. The email leaves them wondering, "Why are you sending me this?" A 1998 study on corporate email use by Kimble, Hildredth and Grimshaw found that the mean volume of unnecessary email sent per day was twenty-five percent of the total email received. For most of the corporation's users, this amounted to simply two to three unnecessary emails daily. Analysis of the organization in terms of the formal structure, however, showed that members at the higher levels of the organization received a far greater proportion of unnecessary email than did others.²⁷ Senior managers are the frequent targets of these mass mailings, simply because of their position. Some effective managers have developed internal policies designed to preclude unnecessary and vague messages by instituting policies that are simple in theory, but difficult in practice without continued training and reminders. They insist that senders only place addressees on the "to" line who are actually expected to provide an action or response to the message. Any recipients who might be tangentially interested in the message (such as a corporate budget officer) or marginally interested (including managerial interest by a boss) should be placed in the

“cc” (“carbon copy”) line. (They could also be added to the “bcc” line, or “blind carbon copy” line, depending on local office practices.) A “cc” recipient should be one from whom the sender does *not* expect a direct action or even a response. More importantly, these efficient managers insist that email messages sent to them consist of a short introduction and summary, particularly when the email or forwarded email is lengthy or complicated. They want to know, up front, a summary of the issue, who is involved, potential recommendations and what is expected of them.

- Computer network memory is an extremely finite resource that must be aggressively managed in such a way that best supports the organization. Don't attach large files (as determined by the system administrator's local capacity and policy) without getting permission from your recipient first, particularly when there is a limit on a user's inbox memory. In addition to being perceived as unprofessional, users in a formal organization who use cute, flowery or thematic templates that are available in many email programs are causing unnecessary expenditure of memory and bandwidth. Use of templates that have function, on the other hand, such as common-use forms (e.g. While You Were Out and fax cover letters) should be encouraged.
- Many programs allow users to create personalized “trailers” or “signatures” featuring their name, address, and other vital information that is automatically added to the end of the message. Resist the temptation to add cute, yet spacious pictures and other memory-wasting additions to a legitimate trailer. Recipients may balk at the memory you took up on their accounts as your message arrives in their inbox, not to mention the time it takes them to download your messages if they are using a modem to send and receive email. System administrators and management may have similar concerns about unnecessarily wasted memory and bandwidth on their servers.
- When importance of a message justifies it, provide an immediate, brief reply to let the sender know you received the message, even if you intend to send a longer reply later. Reasonable expectations for email conduct depend on your relationship to a person and the context of the communication. For example, this might be particularly important when you've received a message from a senior manager.
- Understand that emails are not truly gone when they are deleted. They may be passed on to any number of other users for an indefinite period. They are also stored indefinitely (even after every user deleted the message) on the network server and on backup tapes. Users should only write messages that they would not mind making the front-page news. Consider your and your organization's potential legal liability posed

from a variety of threats ranging from lawsuit for harassment and discrimination to informally recorded, poor corporate decisions. Some companies have discovered the hard way that inappropriate messages are financial, ethical and legal land mines. Chevron, for example, paid \$2.2 million to settle a lawsuit brought by a female employee protesting an email circulated in the company that listed twenty-five reasons why beer is better than women.²⁸

- Most email programs have a feature that automatically responds to anyone who sends you email while you're away. The message you design can tell your correspondent how long you'll be gone and whom to contact if the information is urgent. This feature, in and of itself, fosters improved communications within an organization.
- Do not assume that urgent emails have reached the intended recipient simply because the message left your outbox and no error message was returned. If an email is urgent, follow it up with a call or other method if you have not received a response within a reasonable period.²⁹
- The fact that an organization's senior leaders have a listed email account doesn't necessarily mean they want or deserve to hear directly from any level of employee. Even if they don't mind, this will most likely cause serious problems between the sender and every boss between the sender and the senior level recipient. While every commander typically has an official open door policy, ideally these policies are controlled to ensure that subordinates use their chains of command and exhaust intermediate levels of complaint resolution before going to the top. A junior level subordinate would never call or arrange a meeting with the commander without going through his chain of command first; nor should a subordinate email a commander with a complaint without using the same chain of command. Follow your organization's chain of command procedures when corresponding with superiors. Complaints and suggestions should be submitted in accordance with established company policy.
- Similarly, with a commander's email address just few keystrokes away, anyone with email access can bypass an organization's staff for direct, immediate and unfiltered access to the commander. This would never have been possible before email. Correspondence arriving at a battalion headquarters, including taskings and requests for information, was once received, separated, suspended and assigned for action by the administrative staff, often in coordination with the executive officer. Today, it is just as likely that the same request for information, and in some cases, taskings, will arrive directly via email into the battalion commander's inbox. This pulls a commander

away from their leadership duties and causes them to have to perform administrative duties as they either forward it to an action officer or otherwise respond. In many cases, the commander might answer the message, again performing staff duties, and in the process actually dilute the cross communications that would have occurred if the correspondence had flowed through normal channels. Frequently, these forwarded emails are forgotten, lost, ignored or otherwise not tracked as they used to be by the S1. When company commanders have email, they are subjected to similar encounters, in their case by the battalion staff. This tendency has the negative potential of causing commanders to remain near their computers, waiting for the next "important mission" instead of being "out and about" checking on their units. It leads Army officers dangerously close to "commanding by email."

- Supervisors should never criticize or reprimand by email. Counseling should be conducted privately, in person, to allow a meaningful and "media rich" exchange of information.
- Use of "net shorthand" such as, "Can U plz send info on xyz b4 noon? Tx!" (Translated: Can you please send information on xyz before noon? Thanks!) may be appropriate for communicating with friends, but not for writing to someone you've never met, a superior, or to other employees who aren't familiar with the abbreviations. In cases where an email needs to be somewhat more formal, such as one that is sent to an external organization, treat the message like a letter with a formal opening and salutation.
- Similar to "net shorthand" are keyboard conventions known as "emoticons" that are designed to relate emotions. Examples include :) and :(which are intended to convey the feelings of happy and sad respectively. These are fine for personal emails but are inappropriate for business use. The meaning of your words should be contained within the combination of the words themselves, and not need additional explanation with unconventional symbols.

"THE RECEIVER'S PLIGHT" – AN ARMY DILEMMA

In 1982, Peter Denning, then President of the Association for Computing Machinery, first wrote about the pain of working with email, calling it "The Receiver's Plight" and asking, "Who will save the receivers (of email) from drowning in the rising tide of information so generated?"³⁰ The Army is not exempt from this swelling flood of information.

The information explosion that has contributed to "information overload" is extensive and email is simply one communication forum used by workers as they struggle to keep track of an ever-increasing body of knowledge. Handling the amount of collective knowledge that confronts today's workers is no easy task, especially considering the rate of the growth of knowledge seen today. In 1973, French economist Georges Anderla of the Organization for Economic Cooperation and Development attempted to assess this rapid rate of growth of knowledge. He quantified the amount of scientific facts humanity had amassed in the year AD 1, and measure growth against that collective unit as a standard. Anderla estimated that humans had doubled their knowledge in 1,500 years, doubled it again in another 250 years, doubled it once again in the ensuing fifty years, and have been continuing to double the amount of factual knowledge repetitively in less than ten years ever since with no indication of this acceleration slowing. In fact, in today's "information revolution, human knowledge is estimated to be doubling once every eighteen months."³¹ Accordingly, if we fail to improve the way individuals and organizations handle and use this vast amount of information, we stand the chance of being overrun by the same information that could make us successful in business or on the battlefield. Taking no action to keep up with the information flow by developing doctrine, policy, tactics, techniques, and procedures may simply place us in a position of being overwhelmed.

The Army has not distanced itself from technological innovations and does not simply consider email a peacetime, administrative tool. In fact, as an organization, the Army has a propensity to gravitate towards information technologies. According to Robert Bateman III in his book on digital war, "Slides and graphics, once simple and rare below division level, now appear as major works of art at the company level and are used for every occasion. Faxes, modems, email, and the Internet are integrated into our daily existence."³² The Army even trains its leaders to respond to untoward email incidents. One such training scenario involves an anonymous email from a deployed soldier who sends an email to family members that provided graphic descriptions and pictures of abusive interrogations of persons suspected of providing information to the enemy. With the family members distressed over the emails, the media pressing the post commander for details, and one spouse actively seeking media attention, the scenario asks these new Information Age leaders to decide what to do.³³

Understanding that unstructured email use can cause lost productivity and hamper effective communication is the first step towards development of a solution. In General Wesley Clark's book Waging Modern War, he describes a dialogue between himself and General Shelton, the Chairman of the Joint Chiefs of Staff, concerning estimations of targeted buildings and whether they were populated or not. He had indicated a concern about targeting, estimates

and how to minimize collateral damage and had expressed reservation about how to reliably do so. General Shelton suggested he use the "formula" for estimating unintended civilian casualties. Although General Clark knew there were formulas for estimating collateral damage, he was not aware of any method of predicting unintended civilian casualties in strikes against targeted buildings. It is not difficult to imagine General Clark's surprise and probable embarrassment when he learned that it was his own staff of intelligence analysts who had developed the formula and that they had shared it with the Joint Staff without telling him or the rest of his staff. General Clark described this as a "real foretaste of the kinds of issues raised by open-architecture, Internet-based communications."³⁴

Recently, to determine the characteristics and skills required of today's leaders who must conduct strategically responsive operations in tomorrow's full spectrum battlespace, the Army, at the request of its Chief of Staff, General Shinseki, studied how to develop leader competencies related to effective and superior performance. The Army Training and Leader Development Panel (ATLDP) Officer Study Report identified that there are specific characteristics and skills required of an "Information Age" Army leader in order for them to be effective in a full spectrum battlespace. While the study identified several core common competencies (including self-awareness and adaptability), it did not address the need for a full understanding of email management.³⁵ It did, however, determine that the officer education system, officer training and leader development were essential issues in the formation of Army culture.³⁶ Regardless, neither the Training and Doctrine Command Common Core Subjects for the Basic Officer Leader's Course nor the Army Training Support Center's Correspondence Course Programs have any courses in email use.

The Army has recently developed a supporting infrastructure to begin wrestling with some of the issues that have arisen since the advent of the Internet, information systems, email and the "information overload" these systems purport to cause. Initially, it created the functional proponent for information operations known as the Director of Information Systems for Command, Control, Communications and Computers (DISC4) and later, under the requirements of the Information Technology Management Reform Act of 1996, it appointed the DISC4 to perform as the Army Chief Information Officer (CIO). The DISC4, since named the Army CIO / G6, is responsible for formulating policy, managing Army information systems and, among other missions, to direct and manage the information management activities of sustaining base information systems. One of its projects, the Electronic Business / Electronic Commerce project, involves development and application of electronic techniques for accomplishing business transactions, including electronic mail or messaging, World Wide Web technology,

electronic bulletin boards, purchase cards, electronic funds transfers, and Electronic Data Interchange (EDI).³⁷ In support of the DISC4, the Army developed a new functional area career management field in information operations that provided officer career choices in information systems and information operations (also public affairs, strategic intelligence and space operations). These two fields specialize in systems architecture and the operational aspects of information management. The information management field's purpose is to "respond to the battlespace opportunities and challenges of accelerating growth in information and information dissemination capabilities supported by emerging information system technologies."³⁸

In August 2001, the Chief of Staff of the Army and the Secretary of the Army signed a memorandum directing the Army to move towards Knowledge Management as it transforms into a network-centric, knowledge-based organization. This guidance memorandum identified five goals and directed the Army CIO to develop implementing instructions. One of the goals, "Integrate Knowledge Management and Best Business Practices into Army Processes," directs the Army to establish collaborative work environments and find innovative ways of doing business to improve Army decision making and operations.³⁹

CURRENT ARMY POLICY

The Army has no shortage of bureaucratic rules, regulations, policies or procedures for almost every conceivable activity. As an institution, it relies on these governing documents to help establish and standardize mutually acceptable operating parameters and ensure common understanding to prevent disaster in confusing times. Army Regulation 25-50, Preparing and Managing Correspondence, describes the organizational "goal of all Army correspondence" to be "effective communication," yet this recently updated regulation only mentions email twice. The first mention describes email as one of five methods of communication and later it indicates that "Electronic mail may be used for unclassified organizational and individual information transfer."⁴⁰ These are relatively unsubstantial tips considering how prevalent email has been in the Army – arguably our communication forum of choice.

Field Manual 101-5, Staff Organization and Operations, appears to have addressed email management somewhat more extensively. It describes the Army command and control system as the facilities, personnel, equipment, *communications and procedures* essential to a commander for planning, directing and controlling operations – its result is combat effectiveness. It goes on to say that the staff's role is to organize, analyze and present vast amounts of information to make it manageable for the commander with the primary product being enhanced understanding and situational awareness. The staff assists the commander by

collecting, processing, analyzing and transforming data into knowledge, allowing the commander to apply his judgment.⁴¹ It further asserts that "writing is a means of communicating with commanders and other staff officers. Effective staff writing should convey the writer's exact meaning and should not be subject to misinterpretation."⁴² An effective staff officer is also expected to be proficient in using computer technology such as word processing, electronic mail and other available resources to more efficiently manage time and to solve problems and disseminate information.⁴³

Few corporations actually have viable appropriate email use policies that address how to structure and use emails for maximum benefit. The email policies that exist merely address the content, distribution and privacy of email.⁴⁴ Only about a fourth of all businesses have established written guidelines for employee use of email systems and few of them adequately address the problems that can arise out of corporate email use.⁴⁵ Like many of these organizations, the Army lacks an overarching policy on email use in the workplace. This is not to say that the Army has not come far towards standardizing procurement of computer applications (and in the same stroke saving a great deal in volume purchasing power). Almost gone are the days where Army users were unable to read many of the email attachments they received due to incompatible programs. Today, it seems to be more an issue of which version of software application is being used than anything else. Michael Overly, Special Counsel to the Information Technology Department at a Los Angeles law firm, authored an entire book devoted to "e-policy" in order to help develop computer, email and Internet guidelines designed to protect the company and its assets from liabilities.⁴⁶ He writes that businesses should take steps to ensure that their employees use email appropriately and professionally by creating formal email policies that specifically define duties and responsibilities of users. He goes on to state that the policy should require employees to draft their emails with as much care and discretion as if it were any other written business communication.⁴⁷

EDUCATION

A well-written policy, though, is only half the battle. The policy must be the subject of a sustained effort to educate employees on its content. Informing them once is not enough; policies must be reinforced and updated to change with organization-specific issues and the changing of technology. Once a policy is developed, the question becomes "How does a large organization like the Army develop and maintain norms and cultures?" For example, no one signs official correspondence in the Army with anything but black (or blue-black) ink. There is a written standard in Army Regulation 25-50 that prescribes use of only these ink colors, but it is

unlikely that any soldier could tell you how they came to know that standard. The answer lies in the establishment of a recorded policy, training, repetition and enforcement.

RECOMMENDATION

The first line of defense against email trouble is a solid email usage policy, regularly communicated and consistently enforced. Unfortunately, no single email policy works for all companies. The Army must develop an overarching institutional email policy and incorporate it into Army Regulation 25-50 and Field Manual 101-5. The policy should prescribe a general standard that can be modified at the local level to allow for organization-specific variances (such as maximum email attachment size, inbox memory limitations and personal use policy to name a few). It should include a description of email conventions and methods including, as a minimum, those listed earlier in the rules of netiquette. Once developed, these policies must be taught at entry-level service schools and in appropriate correspondence courses to initiate soldiers and Army civilians into the Army culture (just as they are trained on which ink color to use for official correspondence, and how to use the chain of command for problem-solving).

In their study Replying to Email with Structured Responses, Camino, Milewski, Millen and Smith suggest that software developers can and should make "form emails" complete with buttons, menus and formatted response fields to help impose *a priori* structured responses. This study suggests that structured response objects can provide a broadly useful means for increasing the efficiency of processing and managing emails. It also suggests that some of the email communications burden should be shifted from the responder to the sender by making the sender develop a structured response format.⁴⁸ The standard email program currently used by the Army is Microsoft's Outlook® program. Outlook's® "Plan a Meeting" feature is an example of a structured response. As a scheduler sends a meeting invitation to other email users, the scheduler is able to see the calendars of the potential participants (assuming the participants use Outlook® calendar schedules). The scheduler is able to select a time in which all potential participants appear to be free and can then send a form email inviting the potential participants to "accept" or "decline" the proposed meeting time. Each recipient is able to simply click on the "accept" or "decline" response button and return the email structured response. "Accepting" the invitation automatically posts the meeting to the addressee's calendar.

A common protocol in the defense medical field for recording a patient's assessment, diagnosis and treatment plan is to enter the information in the health record using a "SOAP" format. Use of the SOAP format, an acronym for "Subjective, Objective, Assessment and Plan," ensures that the provider has considered and documented all essential facets of the malady. It

also enables other providers who read the chart to better understand the patient's history. The Army should develop a similar procedural format for its staff as they collect, process and evaluate information and then email the information to commanders and other senior leaders.

In Field Manual 101-5, Appendix C establishes the format of a staff estimate to the commander. The five-part estimate consists of the mission, situation and considerations, analysis, recommendation of compared options and conclusions.⁴⁹ These five elements should be the minimum essential components of a structured email message that is sent up the chain of command by a subordinate. This structured email format should be captured as a standard in both Army Regulation 25-50 and in Field Manual 101-5. Local organizations can develop form email templates that support these essential elements of email content to support staff actions, concurrences and other decision support correspondence.

The Army CIO / G6, in conjunction with the Combined Arms Center and the proponent for Army Regulation 25-50 (the Deputy Chief of Staff of the Army for Personnel), should develop and include this overarching email use policy as a project under the Army Knowledge Management strategy as directed by the Chief of Staff of the Army and the Secretary of the Army. Once developed, Training and Doctrine Command should incorporate training of the policy at entry level schools and at appropriate level staff courses.

CONCLUSION

While email is a relatively new method of communication, it is a powerful communications enabler that has become one of the preferred methods of communication in corporate, defense and private sectors. Inappropriate use of email can cause significant inefficiencies, resentment and can contribute unnecessarily to "information overload." Inappropriate use can also cause serious harm to an organization resulting from successful lawsuit. The Army is long overdue in the development of an overarching email use policy that can be amended at the local level to suit organizational variances. The policy must be recorded in common use publications, taught at entry-level schools, modified as needed and constantly enforced. General Clark recognized that he had experienced a "real foretaste of the kinds of issues raised by open-architecture, Internet-based communications." Will the rest of the Army's leaders recognize these same issues and act accordingly?

Word Count = 7,313

ENDNOTES

¹ Jean Guisnel. Cyberwars: Espionage on the Internet (New York, NY: Plenum Press, 1997), 15.

² Graham Molitor, "5 Force Transforming Communications," The Futurist (Sep-Oct 2001): 37.

³ "The Clinton Administration's Framework for Global Electronic Commerce," Business America, January 1998, 18.

⁴ "A Brief History of the Internet," available from <<http://www.isoc.org/internet/history/brief.shtml#Transition>>; Internet; accessed 10 Feb 2002.

⁵ Dave Kristula, "The History of the Internet," March 1997 updated August 2001; available from <<http://www.davesite.com/>>; Internet; accessed 12 February 2002.

⁶ Guisnel, 15.

⁷ William J. Clinton, A National Security Strategy for a New Century, (Washington, D.C.: The White House, 1997), iii and 14.

⁸ William J. Clinton, A National Security Strategy for a Global Age, (Washington, D.C.: The White House, December 2000), 24.

⁹ Kristula.

¹⁰ Molitor, 37.

¹¹ Jeffrey Cole, "The UCLA Internet Report: Surveying the Digital Future," 29 November 2001; available from <www.ccp.ucla.edu/pages/internet-report.asp>; Internet; accessed 2 February 2002.

¹² Michael R. Overly, e-policy: How to Develop Computer, Email, and Internet Guidelines to Protect Your Company and Its Assets (New York, NY: American Management Association, 1999), ix.

¹³ Gina Venolia et al., "Supporting Email Workflow," available from <<http://research.microsoft.com/research/coet/Email/TRs/01-88.pdf>>; Internet; accessed 11 December 2001.

¹⁴ LTC Cary Hilton <Cary.Hilton@carlisle.army.mil>, "EMail Data, Thursday 28 March 2002," electronic mail message to LTC Frederick Gargiulo <Frederick.Gargiulo@carlisle.army.mil>, 28 March 2002.

¹⁵ Martha Heller, "Sound Off: Has Email Made You More Productive?," CIO 2 February 2000; available from <<http://comment.cio.com/soundoff/020200.html>>; Internet; accessed 5 November 2001.

¹⁶ Allison M. Loperfido, "Electronic Mail as a Media Choice for Managers,"; available from <<http://web.mit.edu/afs/athena/dept/libdata/applications/ejournals/c/restricted/EJC/3/>>; Internet; accessed 18 Dec 2001.

¹⁷ Ibid., 7-8.

¹⁸ S. Connell and I. A. Galbraith, Electronic mail: A revolution in business communication (New York: Van Norstrand Reinhold Company, 1980), 43.

¹⁹ Loperfido, 4.

²⁰ Dan Blum and Gary Rowe, "Can We Handle All This Mail?" NetworkWorldFusion News June 1998; available from <<http://www.nwfusion.com/newsletters/gwm/0601gw1.html>>; Internet; accessed 18 December 2001.

²¹ Lisa Guernsey, "Why Email Is Creating Multiple E-Personalities," NYTimes.com 26 September 2001; available from <<http://www.nytimes.com/auth/login?URI=http://www.nytimes.com/2001/09/26/technology/ebusiness/26GUER.html>>; Internet; accessed 6 January 2002.

²² "SurfControl's SuperScout Email Filter Earns Five-Stars From SC Magazine," 12 August 2001; available from <http://www.surfcontrol.com/news/press_releases/content/09_11_2001c.html>; Internet; accessed 16 Dec 2001.

²³ "Email Etiquette Guidelines for Connecticut State Government," 29 July 1999; available from <<http://www.state.ct.us/cmac/policies/netiqu.htm>>; Internet; accessed 2 October 2001.

²⁴ Dawn McKay, "Email Etiquette," available from <<http://careerplanning.about.com/library/weekly/aa050401a.htm>>; Internet; accessed 16 Dec 2001.

²⁵ "Business Netiquette International," available from <<http://www.bspage.com/1netiq/Netiq.html>>; Internet; accessed 16 December 2001

²⁶ Sally Hambridge, "RFC 1855 Netiquette Guidelines," 23 October 1995; available from <<http://marketing.tenagra.com/rfc1855.html>>; Internet; accessed 15 December 2001.

²⁷ C. Kimble, P. Hildredth, and D. Grimshaw, The Role of Contextual Clues in the Creation of Information Overload (Lincoln University: McGraw Hill, 1998), 405-412.

²⁸ Lauren Gibbons Paul, "How to Tame the Email Beast," CIO 15 October 2001; available from <<http://comment.cio.com/soundoff/020200.html>>; Internet; accessed 5 November 2001.

²⁹ "Dangerous Email - Using Email Effectively and Avoiding Its Traps and Pitfalls," January 2000; available from <<http://www.gadwall.com/whitepapers/email.PDF>>; Internet; accessed 18 November 2001.

³⁰ Venolia et al., 1.

³¹ Peter Russell, "Waking Up in Time,"; available from <<http://www.peterussell.com/WUIT/Language.html>>; Internet; accessed 17 March 2002.

³² Robert Bateman III, Digital War: A View From the Front Lines (Novato: Presidio Press, 1999), 40.

³³ Sean Naylor, "Power to the People," Army Times, 10 Sep 2001, 12 –13.

³⁴ Wesley K. Clark, Waging Modern War (New York: Public Affairs, 2001), 179.

³⁵ William Steele and Robert Walters, Jr. "21st Century Leadership Competencies," Army (August 2001): 30.

³⁶ "Army Acts On Training and Leader Development Panel Findings," 25 May 2001; available from <<http://www.dtic.mil/armylink/news/May2001/r20010525atldp.html>>; Internet; accessed 16 December 2001.

³⁷ "DISC4 – Director of Information Systems for Command, Control, Communications and Computers,"; available from <<http://www.army.mil/disc4/overview/overview.html>>; Internet; accessed 26 February 2002.

³⁸ "FA 30 Information Operations,"; available from <<http://www-perscom.army.mil/opfamio/fa30.htm>>; Internet; accessed 26 February 2002.

³⁹ Secretary of the Army Thomas E. White and Chief of Staff of the Army General Eric K. Shinseki, "Army Knowledge Management Guidance Memorandum Number 1," memorandum for the Assistant Secretaries of the Army, Army Staff, Commanders, Directors, Program Executive Officers, and Program Managers, Washington, D.C., 8 August 2001.

⁴⁰ Department of the Army, Preparing and Managing Correspondence, Army Regulation 25-50 (Washington, D.C.: U.S. Department of the Army, 5 March 2001), 3.

⁴¹ Department of the Army, Staff Organization and Operations, Field Manual 101-5 (Washington, D.C.: U.S. Department of the Army, 31 May 1997), 1-2 to 1-3.

⁴² Ibid., 4-8.

⁴³ Ibid., 3-3 to 4-5.

⁴⁴ Arlene Rinaldi, "The Net: User Guidelines and Netiquette,"; available from <<http://www.logan.net/help/netiquette.html>>; Internet; accessed 6 December 2001.

⁴⁵ Overly, 4.

⁴⁶ Overly, 6.

⁴⁷ Overly, 16-17.

⁴⁸ B. Camino et al., "Replying to Email with Structured Responses," International Journal of Human-Computer Studies no. 48 (1998): 763-776.

⁴⁹ Department of the Army, Staff Organization and Operations, Field Manual 101-5 (Washington, D.C.: U.S. Department of the Army, 31 May 1997), Appendix C.

BIBLIOGRAPHY

- "A Brief History of the Internet." Available from
<<http://www.isoc.org/internet/history/brief.shtml#Transition>>. Internet. Accessed 10 Feb 2002.
- "Army Acts On Training and Leader Development Panel Findings." 25 May 2001. Available from
<<http://www.dtic.mil/armylink/news/May2001/r20010525atldp.html>>. Internet. Accessed 16 December 2001.
- Bateman III, Robert, Digital War: A View From the Front Lines. Novato: Presidio Press, 1999.
- Blum, Dan and Rowe, Gary. "Can We Handle All This Mail?" NetworkWorldFusion News June 1998. Available from <<http://www.nwfusion.com/newsletters/gwm/0601gw1.html>>. Internet. Accessed 18 December 2001.
- "Business Netiquette International." Available from <<http://www.bspage.com/1netiq/Netiq.html>>. Internet. Accessed 16 December 2001.
- Camino, B., A. Milewski, D. Millen, and T. Smith. "Replying to Email with Structured Responses." International Journal of Human-Computer Studies no. 48 (1998): 763-776.
- Clark, Wesley K. Waging Modern War. New York: Public Affairs, 2001.
- Clinton, William J. A National Security Strategy for a Global Age. Washington, D.C.: The White House, December 2000.
- Clinton, William J. A National Security Strategy for a New Century. Washington, D.C.: The White House, 1997.
- Cole, Jeffrey. "The UCLA Internet Report: Surveying the Digital Future." 29 November 2001. Available from <www.ccp.ucla.edu/pages/internet-report.asp>. Internet. Accessed 2 February 2002.
- Connell, S., & Galbraith, I. A. Electronic mail: A revolution in business communication. New York: Van Norstrand Reinhold Company, 1980.
- "Dangerous Email - Using Email Effectively and Avoiding Its Traps and Pitfalls." January 2000. Available from <<http://www.gadwall.com/whitepapers/email.PDF>>. Internet. Accessed 18 November 2001.
- "DISC4 – Director of Information Systems for Command, Control, Communications and Computers." Available from <<http://www.army.mil/disc4/overview/overview.html>>. Internet. Accessed 26 February 2002.
- "Email Etiquette Guidelines for Connecticut State Government." 29 July 1999. Available from
<<http://www.state.ct.us/cmac/policies/netiqu.htm>>. Internet. Accessed 2 October 2001.

- "FA 30 Information Operations." Available from <<http://www-perscom.army.mil/opfamio/fa30.htm>>. Internet. Accessed 26 February 2002.
- Guernsey, Lisa. "Why Email Is Creating Multiple E-Personalities." NYTimes.com 26 September 2001. Available from <<http://www.nytimes.com/auth/login?URI=http://www.nytimes.com/2001/09/26/technology/ebusiness/26GUER.html>>. Internet. Accessed 6 January 2002.
- Hambridge, Sally. "RFC 1855 Netiquette Guidelines." 23 October 1995. Available from <<http://marketing.tenagra.com/rfc1855.html>>. Internet. Accessed 15 December 2001.
- Heller, Martha. "Sound Off: Has Email Made You More Productive?" CIO 2 February 2000. Available from <<http://comment.cio.com/soundoff/020200.html>>. Internet. Accessed 5 November 2001.
- Hilton, LTC Cary <Cary.Hilton@carlisle.army.mil>. "Email Data, Thursday 28 March 2002." Electronic mail message to LTC Frederick Gargiulo <Frederick.Gargiulo@carlisle.army.mil>. 28 March 2002.
- Jean Guisnel. Cyberwars: Espionage on the Internet. New York, NY: Plenum Press, 1997.
- Kimble, C., P. Hildredth, and D. Grimshaw. The Role of Contextual Clues in the Creation of Information Overload. Lincoln University: McGraw Hill, 1998.
- Kristula, Dave. "The History of the Internet." March 1997 updated August 2001. Available from <<http://www.davesite.com/>>. Internet. Accessed 12 February 2002.
- Loperfido, Allison M. "Electronic Mail as a Media Choice for Managers." Available from <<http://web.mit.edu/afs/athena/dept/libdata/applications/ejournals/c/restricted/EJC/3/>>. Internet. Accessed 18 Dec 2001.
- McKay, Dawn. "Email Etiquette." Available from <<http://careerplanning.about.com/library/weekly/aa050401a.htm>>. Internet. Accessed 16 Dec 2001.
- Molitor, Graham. "5 Force Transforming Communications," The Futurist (Sep-Oct 2001): 37.
- Naylor, Sean. "Power to the People." Army Times, 10 Sep 2001, 12-13.
- Overly, Michael R. e-policy: How to Develop Computer, Email, and Internet Guidelines to Protect Your Company and Its Assets. New York, NY: American Management Association, 1999.
- Paul, Lauren Gibbons. "How to Tame the Email Beast." CIO 15 October 2001. Available from <<http://comment.cio.com/soundoff/020200.html>>. Internet. Accessed 5 November 2001.
- Rinaldi, Arlene. "The Net: User Guidelines and Netiquette." Available from <<http://www.logan.net/help/netiquette.html>>. Internet. Accessed 6 December 2001.
- Russell, Peter. "Waking Up in Time." Available from <<http://www.peter russell.com/WUIT/Language.html>>. Internet. Accessed 17 March 2002.